

Remarks:

This amendment is submitted in an earnest effort to advance this case to issue without delay.

This amendment has been made to clarify that, as disclosed in the original application papers, with the instant invention the entire stack is pushed back in to be inward of the edge of the substrate it is on, not just some wayward sheets.

The claims have been amended to clarify the instant invention. As recited in the original application text (see page 2 of Substitute Specification):

Previously known mechanical devices cannot be used since, during alignment with these devices, the lower edges are bent downward as a result of the force of the alignment device and can be clamped between the transport substrate and the aligning device. Apart from the fact that the bent-down sheets can no longer be used, the bent-down sheets also prevent further displacement, so that satisfactory alignment is not possible.

The improvement of the invention is therefore, as recited in original translated claim 1,

at least the subregion of at least one aligning device  
(5) which comes into contact with the lower region of the

item (2) projecting laterally beyond the outer contour of the transport substrate (1) during the alignment of the item (2) on the transport substrate (1) is assigned a stabilizing device (8) which prevents the item (2) being deflected in the direction of the transport substrate (1).

This feature is now clearly described and recited in the amended claims that make it clear that the instant invention has this stabilizing means that prevents the sheets 2 from being deflected downward, which is inherently the direction toward the substrate on which the stack of sheets 2 lies, as the stack is being pushed back to lie with in the edges of the substrate.

Nothing like this is seen in the art.

More particularly, the main reference, US 6,073,926 of Kanada, describes a sheet discharge device that has among other a sheet-position controller that abuts on a discharge end of a sheet with an image formed thereon to be discharged from a printer, a copying machine or another image forming device. This device has several distributions bins 4 that each have several trays in each of which sheets are collected. FIGS. 8a. and 8b for example show two trays.

Claim 1 of Kanada describes how a single sheet is stopped by a member and, after discharging and placing the sheet on the

tray, the sheet is pushed and repositioned to have its end sheet match to a predetermined position. Therefore, the aim of Kaneda is to stop a single sheet and afterward position it.

The main difference between Kaneda and the instant invention is because Kaneda relates to handling single sheets in a copy machine. The instant invention is aimed at stacks of sheets on pallets. There is nothing like the folding down problem of the instant invention. The total weight of a stack of paper - depending on the dimensions of the pallet - is between 600 kg and 2 t. The invention relates to the alignment of a stack of sheets on a pallet, which might have this very large weight. This is a substantially different problem from that faced by Kaneda.

US 4,154,330 of Lucas describes a device for centering loads and having two jaws 28 that engage the pallet 31, so that the pallet is straightened automatically as described in column 4, lines 44 ff..

As described in column 6, line 5 ff, the device can also be used to straighten up the load 30 on the pallet at the same time. Each arm 23 has a large rigid plate 36 higher and wider than the jaws 28. This is described in column 6. While the carriages 17 continue their advance, the first plate 36 that meets the irregularly loaded pallet will push it, square it up and straighten it (column 6, lines 30 ff). The two carriages 17 will continue to move until the two plates 36 are in contact with and compress the

load according to the same principle as for the straightening jaws 28.

Lucas represents the known state of the art which is mentioned in the description of the invention. See for example the 4th paragraph of page 1. Lucas has rigid plates 36, but does not give any hint for a stabilizing element which prevents the stack of papers in the lower region during the aligning being deflected in the direction of the transport substrate. The reason the Lucas system works is that it is dealing with fairly rigid cardboard, not the paper sheets of this invention.

US 6,231,299 of Newsome does in fact deal with the problem addressed by the instant invention, namely the alignment of flexible sheets in a stack of such sheets. Newsome does this by engaging foam-covered rollers 22 against sides of the stacks as same move along on a conveyor, much like the brushes in a car wash. The rollers 22 are rotatable about horizontally fixed vertical axes and as shown in FIG. 4 are in fact set to be compressed against the sides of the stack S so that they will inherently bend and fold over anything projecting from the side. There is nothing here to suggest engaging under projecting sheets while pressing them in, so this reference is totally irrelevant to claims 19 and 26 and any claims dependent thereon. Furthermore the fact that the rollers 22 compress against the sides of the stack and engage anything projecting incrementally in a manner guaranteed to fold it over

would seem to mean that there is no problem with sheets being bent down, probably because the sheets here are so stiff that they can be thus tamped together into stacks without folding. The contact region between the rollers and anything that projects is so small that, unless the projecting part were very stiff, it would undoubtedly be folded over. Alternately is it possible that the problem of folding over sheets is simply not recognized by Newsome, a possibility borne out by the fact that this problem is not discussed in this reference. Newsome therefore adds nothing to the combination of Kaneda and Lucas.

Greller describes a total different device for a total different application. Here the goal is to put a stack of printed magazines from a printing press on a pallet. The operation of the device is described in column 4, lines 62 ff. After lowering the gripping mechanism over the stack S a bar 6 is raised so that the stack S has the shape shown in FIG. 1. Then the clamping jaws 27 move toward each other so that the clamping plates 28 contact the stack S, compressing and arching it even more in the direction predetermined by the pre-arching operation. Due to the arched shape, the magazines Z are of so stiffness that they cannot sag downward. Therefore, also Greller does not give a hint to the invention. There is no aligning of a stack. Moving the clamping jaws 27 toward each other serves to make contact with the stack S,

so that the shape of the stack S shown in FIG. 1 is kept during lifting up the stack.

For these reasons all the claims in the case are in condition for allowance. Notice to that effect is earnestly solicited.

If only minor problems that could be corrected by means of a telephone conference stand in the way of allowance of this case, the examiner is invited to call the undersigned to make the necessary corrections.

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